

IN THE CLAIMS:

Claims 9-12, and 22 have been amended herein. Please note that all claims currently pending and under consideration in the referenced application are shown below. Please enter these claims as amended. This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (original): A method for bulk laser ablation of a fluorocarbon resin which comprises irradiating laser light onto or penetrating into a fluorocarbon resin containing a UV absorbing material.

Claim 2 (original): The method of claim 1, wherein the UV absorbing material is present in the fluorocarbon resin in an amount from about 0.1 wt. % to about 25 wt. %.

Claim 3 (original): The method of claim 1, wherein the UV absorbing material is present in the fluorocarbon resin in an amount from about 0.5 wt. % to about 15 wt. %.

Claim 4 (original): The method of claim 1, wherein the UV absorbing material is carbon black.

Claim 5 (original): The method of claim 1, wherein the wavelength of laser light is from about 180 nm to about 400 nm.

Claim 6 (original): The method of claim 1, wherein the fluence of laser light is from about 0.1 J/cm²/pulse to about 1 J/cm²/pulse or higher.

Claim 7 (original): The method of claim 1, wherein the fluence of laser light is from about 1 J/cm²/pulse to about 10 J/cm²/pulse.

Claim 8 (original): A method for bulk laser ablation of a fluorocarbon resin which comprises irradiating laser light onto or penetrating into a fluorocarbon resin containing a UV absorbing material, said UV absorbing material present in an amount of from about 0.1 wt. % to about 25 wt. %, the wavelength of the laser light is from about 180 nm to about 400 nm, the fluence of the laser light is greater than 0.5 J/cm²/pulse.

Claim 9 (currently amended): The method of claim 8, wherein the UV absorbing material ~~depant~~ is present in an amount from about 0.5 wt. % to about 15 wt. %.

Claim 10 (currently amended): The method of claim 8, wherein the UV absorbing material ~~depant~~ is present in an amount from about 1 to about 10 wt. %.

Claim 11 (currently amended): The method of claim 9, wherein the UV absorbing material ~~depant~~ is present in an amount of about 4 to 6 wt. %.

Claim 12 (currently amended): The method of claim 8, wherein the UV absorbing material ~~depant~~ is carbon black.

Claim 13 (original): The method of claim 8, wherein the wavelength of the laser light is from about 193 nm to about 355 nm.

Claim 14 (original): The method of claim 8, wherein the wavelength of the laser light is from about 248 nm to about 315 nm.

Claim 15 (original): The method of claim 8, wherein the translational movement of the laser is from about 0.1 mm/sec to about 2 mm/sec.

Claim 16 (original): A method of bulk microstructure microfabrication of a substrate comprising the steps:

obtaining a fluorocarbon resin substrate containing a UV absorbing material, said UV absorbing material present in an amount of from about 0.1 wt. % to about 25 wt. %; and

irradiating laser light onto or penetrating into the fluorocarbon resin, the wavelength of the laser light being from about 180 nm to about 400 nm, the fluence of the laser light being greater than 1 J/cm²/pulse.

Claim 17 (original): The method of claim 16, wherein the UV absorbing material is carbon black, a metal oxide, or a UV absorbing organic dopant.

Claim 18 (original): The method of claim 16, wherein the UV absorbing material is carbon black.

Claim 19 (original): The method of claim 16, wherein the UV absorbing material is present in the fluorocarbon resin in an amount from about 0.5 wt. % to about 15 wt. %.

Claim 20 (original): The method of claim 16, wherein the UV absorbing material is present in the fluorocarbon resin in an amount from about 1 wt. % to about 10 wt. %.

Claim 21 (original): The method of claim 16, wherein the fluorocarbon resin is irradiated with the laser light of sufficient duration and intensity to fabricate microchannels and/or wells in the fluorocarbon resin substrate.

Claim 22 (currently amended): A method of bleaching a substrate comprising the steps:
obtaining a fluorocarbon resin substrate containing carbon black in an amount of from about 0.01 wt. % to and 1 wt. %; and

irradiating laser light onto or penetrating into the fluorocarbon resin.

Claim 23 (original): A method of microfabricating microfluidic structures in fluorocarbon materials comprising the steps:

obtaining a fluorocarbon resin substrate containing a UV absorbing material, said UV absorbing material present in an amount allowing for adequate depth control of material removal during the laser ablation process;

irradiating laser light onto or penetrating into the fluorocarbon resin, the wavelength of laser light being from about 193 nm to about 355 nm; and

translating the substrate or the laser beam relative to each other to generate microfluidic structures of the desired dimensions.

Claim 24 (original): The method of claim 23 where the fluence of the laser light is greater than about $0.1 \text{ J/cm}^2/\text{pulse}$.

Claim 25 (original): The method of claim 23 where the fluence of the laser light is greater than about $1 \text{ J/cm}^2/\text{pulse}$.

Claim 26 (original): The method of claim 23, wherein the UV absorbing material is present in the fluorocarbon resin in an amount from about 0.5 wt. % to about 15 wt %.

Claim 27 (previously presented): An article containing geometrical physical structures on or in a material prepared according to the method of claim 1.

Claim 28 (previously presented): An article containing geometrical physical structures on or in a material prepared according to the method of claim 8.

Claim 29 (previously presented): An article containing microstructures prepared according to the method of claim 16.

Claim 30 (previously presented): A microfluidic structure prepared according to the method of claim 23.